

Otis (F. N.)

ON THE LIMITATION
OF THE
CONTAGIOUS STAGE OF SYPHILIS,
ESPECIALLY IN ITS RELATIONS TO MARRIAGE.

(Read before the NEW YORK STATE MEDICAL SOCIETY, February 5th, 1886.)

BY
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IN seeking to establish the limit of the contagious stage of syphilis, it is important to appreciate what has up to the present time been determined in regard to the nature of the *contagium* of syphilis. The microscopic investigation of Burdon Sanderson, Beale, and Chauveau resulted, a quarter of a century ago, in the discovery of the disease germs of variola, vaccinia, the cattle plague, and relapsing fever.

It was then demonstrated that a living germinal cell was the starting-point of those diseases in each case. Beale, besides this, claimed that another germinal cell with properties and powers identical with those of the human white blood-corpuscle was the starting-point in syphilis, and he also claimed that this cell was directly descended from degraded cell elements of human origin. It was represented as varying in size, from that of the normal white corpuscle, in proportion to the degree of its degradation, from 1-3,000th to 1-100,000th of an inch, or even less in diameter.

With nothing in its composition, or in its physical proportions, to distinguish it from the nuclei or the nucleoli of the normal white blood-corpuscle, hence with nothing but its morbid activity, its increased capacity for proliferation, to distinguish it from the normal cell elements, it is not surprising that Beale should have failed to demonstrate his theory through microscopic investigation. Alfred von Biesiadecki, of Krakow,

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however, in 1867, discovered a marked proliferation, *in loco*, of apparently normal cell elements, at the site of the syphilitic inoculation, progressing chiefly, if not solely, in the line of the lymph channels, and accumulating in a characteristic way in the lymphatic glands in connection with them; and he claimed this as an evidence that it was through the lymph channels alone that the syphilitic infection invaded the organism.

Cohn, soon after, showed also, through extensive microscopic researches, that the papules of the active, or so-called secondary, stage of syphilis were caused by an accumulation of germinal cells, similar to those demonstrated by Biesiadecki in the initial lesion of syphilis, and in the adjacent lymph channels and glands, and that the mucous patches, tubercles, and the alopecia of syphilis were caused by a similar localized accumulation of cells, proliferated through the syphilitic influence. Other competent observers confirmed these discoveries, and the investigation was pushed forward (notably by M. Cornil, of Paris), until it was shown that every lesion and manifestation of the active or so-called secondary stage of syphilis was characterized by the same aggregation of the newly-formed cells, possessing the contagious property of syphilis, but free from any other distinctive quality except so far as it might result from the greater tendency of the new formation to break down into pus, or from the mechanical pressure caused by the accumulation.

The contagious property of these cells, their power to communicate syphilis through contact with an abraded surface in an otherwise healthy organism, required explanation before the degraded white blood-cell or disease germ of Beale could be accepted as the true *contagium* of syphilis. Rindfleisch, in 1870, called attention to a fact observed by him that normal germinal cells exert an influence upon one another, through contact. He says: "The opinion is inevitable that the embryonal formative cell can only become an epithelial cell when it comes in contact with such; we must believe in a kind of *epithelial infection*." If, then, infection of cells by other cells is accepted as a physiological process, certainly the power of a degraded white blood-cell to accelerate proliferation in normal cells with which they may come into contact may be accepted; and we then have in the degraded white blood-corpuscle of Beale all the necessary attributes to figure effectively as the true *contagium* of syphilis.¹

Through its acceptance as such, I think it can be shown that we have a clue which will lead us to a reasonable explanation of every stage and lesion of syphilis—an explanation in full harmony with all known physio-

¹ This view of the case does not preclude the idea of a possible specific micrococcus which, penetrating the germinal cells, may then become the cause of infection in the same manner as the disease germ of Beale, but until this micrococcus is absolutely demonstrated, we may reasonably accept the possibilities in favor of the degraded white blood-cell.

logical and pathological laws. Through it, we are led to the adoption of a course of treatment which, while still in accord with the results of clinical experience, is no longer empirical. On the other hand, for now more than twenty years, microscopists all over the world have been diligently searching for the syphilitic entity or virus, but without success, although its alleged discovery has been announced, with great publicity and positiveness, from time to time. First it was a minute and peculiar vegetable spore (Salisbury), but this, through more extended investigation, was found unessential to the development of syphilis. It has been displayed to continental scientists as a peculiar corpuscle (Lorstorfer), and was accepted, for a brief period, as the veritable contagium of syphilis; but this was soon proved to be but the simple outcome of various forms of cachexia. Then a rod-shaped micrococcus (Klebs) was brought forward, and claimed to be the true syphilitic principle because capable, through inoculation, in monkeys, of producing lesions resembling those of late syphilis, but this too proved a failure.

More recently, within the past year, it was announced that Dr. Lustgarten, of Vienna, had at last discovered the true virus of syphilis in a characteristic bacillus which he described with great exactness and circumstantiality. Within a few months past, however, investigations touching the validity of this discovery were set on foot by M. Cornil, of Paris, when it was determined that Lustgarten's discovery must be relegated to the list of previous failures. The bacillus in question, while found frequently associated with syphilitic lesions, was not confined to them, but was found in the secretions about the prepuce and the anus in persons not syphilitic.

It will thus be seen that the disease germ of Beale is the only one now in the field which demands consideration as the contagium of syphilis, and it will be my effort to-day to point out the important relations in which it may be claimed to stand with the acknowledged mysteries and disputed doctrinal points of syphilis, especially as affording us much needed assistance in studying the limitations of the contagious stage of the disease.

Although not strictly germane to our subject, permit me, in the first place, to call your attention to the important fact that it is through recognition of the proliferation of cell elements, as a characteristic feature of the initial lesion of syphilis, that we are enabled to set at once and finally at rest the long disputed point as to the unity and duality of syphilis. Through this view, it is seen that syphilis is a disease, essentially of growth, destruction of tissue occurring only as the result of overgrowth, through which the vessels of nutrition of the part are obstructed; while in chancroid the process is a destructive one *per se*. Syphilis may, and not infrequently does, go through all its stages in a characteristic man-

ner without a single breach of tissue, while Chancroid is always and only a process of destruction of tissue.

In whatever consists the true contagium of syphilis, one important fact in relation to it is well proven, namely, that it is contained in the substance of the initial lesion or chancre, and the lymph channels and glands in immediate relation thereto, and that, as a rule, for a period of at least eight weeks, it is confined between this point and the general blood current.

It will thus be seen that the doctrine of a mysterious instantaneous syphilitic infection, as still claimed by some authorities, is denied, and that a gradual infection, through physiological channels, alone can be considered possible.

A few words in proof of this position : Inoculation of healthy persons with the blood of a person affected with an initial lesion of syphilis fails to communicate syphilis until after the eighth week from the date of infection. Several well authenticated cases of this sort have come to my knowledge. Twice the inoculation was in my own person. A great amount of evidence on this point is furnished by Diday. In his work on infantile syphilis, Diday says that syphilis, contracted by the mother, after the seventh month of gestation, has never produced the disease in the fœtus. Abernethy had previously claimed the same immunity for the fœtus after the seventh month, but Diday asserted it as a *law* to which there were practically no exceptions. On page 32 of his work on "Infantile Syphilis," Sydenham edition, 1859, he says : "Under similar circumstances, a child born apparently healthy of a woman, who had contracted syphilis in the eighth or ninth month only, might be entrusted to a nurse without fear of communicating the disease to her."

Practically, then, it is thus shown that the disease, being limited to the initial lesion and its immediate vicinity, during the first two months after infection, syphilis may, up to such period, be claimed as a local and not a constitutional disease.

It has been proven, and accepted by such authorities as Fournier and Cornil, of Paris; Mireur, of Marseilles; Van Buren and Keyes, and Bumstead and Taylor, of New York; Hill and Cooper, of London, and others, that the physiological secretions, mucus, milk, tears, sweat, sebum, urine, semen, etc., do not contain the contagium of syphilis.

A consideration of this important fact enables us to eliminate from the mysteries of syphilitic contagion, such cases as those where the father is claimed to have infected the embryo or fœtus, while the mother escaped the disease, and also makes it clear, beyond dispute, that syphilis is never, under any conceivable circumstances, communicated from the father directly to the fœtus, but that, in order to infect the product of conception before birth, the mother must first be infected. The semen having been

proven not to contain the contagium of syphilis, settles this much-discussed question, inasmuch as, through the semen alone, has the father any possible access to the ovum or the foetus.

It will also be seen that, if the physiological secretions, which do not contain germinal cells, are free from the contagium of syphilis, this constitutes a strong argument in favor of the nature of the contagium of syphilis, as claimed; and further, if contact of a degraded germinal cell is essential to the production of syphilis, and the disease is conveyed to the embryo or foetus, only through the blood of the mother, there is no longer, strictly speaking, any hereditary transmission of syphilis. In order to the acquirement of syphilis an organism free from that disease is essential. The infecting cell of syphilis must first be brought in contact with otherwise healthy cell material.¹ "No mysterious hereditary influence is necessary, nor can be admitted. If the disease germ of syphilis, by contact with external parts, or through its amoeboid power traversing tissue, reaches healthy cell material, whether in the adult, the infant, or the embryo, then the syphilitic influence is *directly transmitted*, and its development must be governed by the same laws that characterize its progress in the known behavior of the disease in the adult, modified, to a greater or less extent, by the age and degree of stability of the tissues involved. It is true that various adynamic conditions in foetal and infantile life, result from pre-existing disease in the generative organs of parents who have been subjects of syphilis; but that any syphilitic disease, proven to be such by its power to transmit syphilis, has been communicated to healthy persons, after the active, or so-called secondary stage of the disease has passed, there is no well-authenticated evidence to prove."

I am quite aware that this position will at first be received with surprise, but it is the logical sequence of the acceptance of the degraded human germinal cell as the true contagium of syphilis, and it can, I believe, be shown to be in the fullest accord with all well authenticated facts in regard to hereditary syphilis.

These views were originally published by me, in a series of class-room lessons, in 1879, and again in my volume on the Physiological Pathology of Syphilis, in 1881, and elaborated more fully in an article on the syphilis of infants and hereditary syphilis, in 1884. It is worthy of remark that Mr. Jonathan Hutchinson, of London, a leading authority on syphilis in Great Britain, has arrived at conclusions identical with my own, in regard to the nature of the so-called Hereditary Syphilis. Thus, in his "Pedigree of Disease," published in London, 1884, page 90, he

¹ See "Syphilis and the Genito-Urinary Diseases." New York: Bermingham & Co., 1883. Student's edition of same, G. P. Putnam's Sons, New York, 1886, page 205 *et seq.*

says: "A child then, I assert, inherits syphilis in precisely the same sense and in precisely the same manner as it may inherit small-pox. It inherits, not *the diathesis, but the disease*. The reason why the inheritance of small-pox is rare, while that of syphilis unfortunately is common, is simply that the period during which the virus is extant, in the blood, is very different in the two cases. The conspicuous facts, then, in reference to the syphilis of infants, afford no proof that the diathesis of syphilis, any more than those of the other exanthemata, is capable of transmission." Mr. Hutchinson further says: "My argument, if I have made it plain, has pointed to the conclusion, that no *minified* transmission of syphilis is possible, and that the child gets, either nothing at all, or the germs of the disease, and that in the latter case they will, subject to the laws of idiosyncrasy, develop equally in all cases."

Having thus indicated the limitation of the contagious element of syphilis in the matter and mode of infection, we have now reached a point where we may, I think, proceed to the consideration of the probable, or possible, limit of the contagious stage of syphilis, in point of time. A very general impression prevails, both in and out of the profession, that syphilis is capable of being communicated to healthy persons, by a person, once the subject of the disease, either by contact or by heredity, throughout the lifetime of the individual. It is a common belief that, when, after years of freedom from any evidence of the disease, any lesion is recognized as due to a former syphilis, it is an evidence of a poison still remaining in the blood of the individual, and that it may be transmitted to a healthy person by contact or by heredity. It has, however, now come to be understood, practically, that when the accumulations of cell material, which have caused the lesions of the secondary stage, and the enlargement of the lymphatic glands at various points, have been eliminated, the disease is, as a rule, no longer contagious, and persons, the subjects of syphilis, who have, by systematic and thorough treatment, been brought to this condition, are said to be cured of syphilis. The time during which the treatment is recommended, by authors, to be continued, is pretty uniformly fixed at about three years. If, then, the patient has been free from all signs of syphilis for one year, he is pronounced cured, and he is permitted to marry.

Fournier says: "The truth is that, with some very rare exceptions, syphilis constitutes only a temporary bar to marriage." Bumstead and Taylor say (5th Edition, page 91): "It may be stated in broad terms that no syphilitic father should procreate children until two years after infection, during which he should sedulously follow a systematic course of treatment." Keyes (*Venereal Diseases*, Wood & Co., 1880) says: "After the virulence of the disease has been exhausted, a man may marry, and should marry." Again, page 78, *ibid.*, "In a general way

it may be safely said that a man should not marry until at least three good years lie between him and his chancre, and at least one year has elapsed since the last symptom which can be ascribed to syphilis." Hill and Cooper (London, 1881): "Under any circumstances, the shortest period between infection and marriage should be three years. . . . Under no circumstances should a person with obvious signs of syphilitic disease marry, however long a time has elapsed since his infection, for, though communication is rare when several years (four or five) have elapsed, *it may still take place after as many as ten or even more years, even when the form of disease is of the character commonly called tertiary.*"

Prof. W. J. White says (Pepper's "System of Medicine," 1885, Vol. ii., p. 259 *et seq.*): "I have repeatedly given permission to marry, or to resume marital relations, after three years or three years and a half of mild mercurial treatment, to which, during the last six months or a year, had been added iodide of potassium. In many instances, healthy children have been born: in none, so far as I know, has the child or mother been directly infected." . . . "At the end, then, of from two to three years, if no symptom has been seen for six months or a year, treatment may be stopped and the patient kept under observation for a year; and if during that time no symptom develops, he may consider himself as, in all probability, cured. . . . There is evidence to prove, on the other hand, that this plan of treatment, rigidly carried out, results, in the majority of cases, in curing the disease, or, at any rate, in putting the patient in such a condition that he may, with safety, marry, and may expect to have healthy children." *Ibid.*, page 261.

It will thus be seen that authors are not quite harmonious in regard to the safety of marriage after syphilis, although all are agreed that no marriage should be permitted until a year after the disappearance of any lesion which could be attributed to syphilis. All are agreed, that the communication of syphilis, after the third year of its existence, is rare. It has, however, been determined, by careful clinical observation, that the contagious element of syphilis, is, as a rule, eliminated within a period varying from perhaps two to four years, and that all the manifestations of disease beyond this time, and apparently due to syphilis, called tertiary lesions, are not entitled to be considered, strictly speaking, as syphilitic. Mr. Hutchinson says of them: "What are called tertiary symptoms do not constitute a necessary stage of syphilis, and are to be regarded in the light of sequelæ." This statement is corroborated by the fact, now well determined, that the secretions of all such lesions are innocuous; and that neither they, nor the tissues, nor the blood of patients bearing such lesion, contain a contagious element. Without the *contagium* there can be no syphilis. Ricord claims that tertiary lesions are not inocu-

lable and cannot be transmitted by hereditary descent. Bumstead and Taylor (4th Edition) say, after reviewing this matter, "Hence we consider the blood and the secretions in tertiary syphilis innocuous." Diday performed inoculations with the blood of persons in the tertiary stage of syphilis, with a negative result.

If time permitted, I think it could be satisfactorily proven to you that the tertiary lesions of syphilis are invariably due to obstructions of lymphatic spaces and channels, the result of simple pathological changes occurring during the active or contagious stage of syphilis.¹ I will simply say that it has been determined, through microscopic examination, that *all* the lesions of tertiary syphilis are characterized by an accumulation of so-called gummy material, and that this gummy material has been found not to differ, in any essential respect, from normal germinal material, and that the damage associated with it, may, in every case, be fully accounted for, by the mechanical influence of its presence. It is to the occasional occurrence of tertiary lesions, in persons who have passed through the active stage of syphilis, that a persistence of the syphilitic diathesis, with all its power of communicating syphilis, for an indefinite period, even possibly through the lifetime of a patient, is claimed. If, therefore, it can be absolutely proven that the active or contagious stage of syphilis does not last indefinitely, and that the lesions of the tertiary stage and the blood, during this period, are free from the contagium, we may then hope to reach some definite limitation of the contagious stage of syphilis, in all cases.²

The acceptance of the degraded human germinal cell, as the true contagium of syphilis, and its logical sequences, as determined through our knowledge of minute physiology and pathology, will lead toward, if not definitely to, such a result. But it is to competent and well-authenticated

¹ See article on "Sequelæ of Syphilis," Otis on "Syphilis and the Genito-Urinary Diseases," page 128 *et seq.*; also Pepper's "System of Medicine," Vol. ii., p. 257.

² "M. Mireux, a careful and accurate observer, records a striking instance in which, in the history of a couple, both syphilitic and *untreated*, eight pregnancies occurred. The first resulted in an abortion at the fifth month; the second, in abortion at the seventh month; the third, in a still-birth; the fourth, a syphilitic child, dying at one month; the fifth, a syphilitic child, dying in forty-five days; the sixth, seventh, and eighth, in living, healthy children. To me the most interesting fact in the whole relation is, that, during a portion of the time, and immediately after the three last pregnancies, which resulted in the birth of healthy children, both husband and wife manifested grave tertiary syphilitic symptoms: gummata, tubercles, ulcers, etc. This is direct evidence of the strongest kind, in favor of the view that syphilis ceases to be transmissible by heredity at the end of a certain period, as we know that it ceases to be contagious or inoculable." Vide article on "Hereditary Syphilis," by Prof. Wm. J. White, Pepper's "System of Medicine," Vol. ii., page 258.

clinical records, that we must now look for the solution of the important question at issue.

In the recent valuable work on Syphilis and Marriage, published by M. Alfred Fournier, of Paris, in 1880, for the purpose of justifying his statements that "*syphilis is but a temporary bar to marriage*" (previously quoted), has presented a series of eighty-seven examples, occurring in his own experience. In presenting the carefully tabulated report of these cases, he says: "For my part alone, I have in my hands, to speak only of written facts, eighty-seven observations relative to syphilitic subjects, undoubtedly syphilitic, who, having married, have never communicated to their wives the least suspicious phenomenon; and, moreover, these 87 have produced among them a total of 156 absolutely healthy children." In examining the tabulated records of these 87 cases at page 231 et seq. of his work (Fournier, "*Syphilis et Marriage*"), I found that 36 out of this number of men, who were thus proven to be free from any power to transmit syphilis, either by direct contact or by heredity, were subjects of late or tertiary lesions *after marriage*, some before, and some after the birth of the children.

These lesions comprise almost all the varieties of the sequelæ of syphilis, thus: gumma of the penis, palmar psoriasis, dry tubercular syphilide, gumma of velum palati, cerebral syphilis, papulo-tubercular syphilide, costal periostitis, cerebro-spinal symptoms, evidently of syphilitic origin, diplopia, passing attacks of hemiplegia, nasal syphilides, ecthyma of legs, syphilitic sarcocoele, nasal ulcers, ulcerative laryngitis, papulo-squamous palmar and plantar syphilides, sclerous glossitis, papulo-sealy syphilides of circinate form, tubercular ulceration, syphilide of the nose, etc.

In examining the tables of M. Fournier still further, it was found that the average time of marriage, after infection, in the eighty-seven cases, was $5\frac{8}{10}$ years; that twenty-five per cent were married within three years after infection, and over ten per cent within two years.

In regard to the length and quality of treatment, over twelve per cent of the eighty-seven cases had treatment of less than a year's duration; several with only a few months, one with the iodide of potash, and another with no treatment at all.

In this enormous mass of evidence, consisting of eighty-seven authentic examples, involving prolonged observation of two hundred and thirty individuals, adduced by an acute, thorough, and competent observer, we have what I shall claim as absolute proof: first, of the non-contagiousness of all syphilitic sequelæ or so-called lesions of the tertiary stage of syphilis. Second, of the possibility of the spontaneous cure of the contagious stage of syphilis (*i. e.*, without treatment), as shown in one case, where there was no treatment, and in another case, where only

the iodide of potash was used. Third, that the limit of the contagious stage in syphilis may then be certainly fixed at a point within the period of five years.

For my own part, I have *never* seen a case of syphilis presenting an undoubted lesion of the secondary or active stage after the termination of the second year. I have seen a goodly number of cases of recurring papular syphilide—especially upon the hands and feet, occasionally upon the body—two and three years after an infection which had been thoroughly and systematically treated from the beginning, and I have always considered them as due to damage done to the lymph channels, during the previous active stage of syphilis. After the third year, in three such cases, marriage has been entered into, with my consent; and in two, recurrences, in the identical places formerly occupied, took place nearly a year after marriage, and in both these cases, the wife remained uninfected, and healthy children were reported, one now three, and the other two years old. I have seen frequent lesions of the tongue, from two to a dozen years after infection, the sequel of mucous patches occurring during the active stage, which had been asserted, by physicians, to be mucous patches, and capable of transmitting syphilis. Sometimes these would present simply as pale pearly stains, or whitish patches, sometimes erosions and ulcerations and cracks; again appearing as irregular spots covered with a white or grayish pellicle with more or less induration. Such lesions I have never known to prove a source of syphilis to others, although the diseased and the healthy came into most intimate contact, such as between man and wife, for a series of years, during which repeated recurrences had taken place. Hence I do not hesitate to state, that such forms of trouble, occurring as a sequel of syphilis, three years or more after infection, do not contain the contagious property of syphilis, and hence cannot communicate it. I have also seen numerous cases and observed them during long periods, in which marriage has taken place from three to twelve or more years after a syphilitic infection of the father, and I have never yet seen a single symptom of syphilis in the wife or in the children born of such marriage. In the reported cases where syphilis has been claimed to have been contracted from persons whose syphilis had its initiation three or more years previously, I believe that, if the truth could be ascertained, it would be shown that the disease was *not* contracted from such persons, but always from a source *less than three years from date of the infection*. The overwhelming evidence, as to the improbability of the communication of syphilis, after the first three or four years from the date of infection, as shown by the statistics of M. Fournier, should lead to the greatest opposition in accepting cases alleged, where syphilis has been acquired in contradiction of this position.

The traditions of syphilis claim, that once a man has had syphilis he is a possible focus of contagion forever, and any evidence that a man has once had syphilis, is held as competent to prove that any syphilitic accident in his family, to the latest generation, may be reasonably credited to him. The important fact that syphilis may be communicated through other sources, is practically ignored. Syphilis from mediate contagion is common. It may be through the medium of a spoon, a pencil, a cane, a cigar, a kiss, the dentist's instruments. The accoucheur may acquire it through his finger. Nine cases of syphilis of the finger I published several years since as occurring under my own observation, and I have seen others since that time. Besides this, I have seen at least double that number of cases of syphilis, where no possible trace of the source of contagion could be ascertained. A tumbler, or any article in common use, defiled with the secretions of a mouth harboring a mucous patch, coming in contact with a crack or abrasion of the lips of a healthy person, may communicate syphilis through a resulting lesion which may pass away unnoticed. Any similar contact with the blood of a person in the active stage of syphilis will communicate it. And yet, if the resulting syphilis is not distinctly traced to some one of these sources, the disease is possibly attributed to some innocent person who has had syphilis, perhaps a quarter of a century before.

It is the *tradition*, based upon the *everlasting* contagious nature of the disease, that the profession are wont to fall back upon to explain the mystery of an unexplained syphilitic infection. Even M. Fournier is not free from the tyranny of this unproven tradition. Notwithstanding the convictions that his intelligent experience has imbued him with, that syphilis is not communicated by any person after the first three or four years from infection, and which impel him to state that *syphilis is but a temporary bar to marriage*, and which makes him say, "Yes, a hundred times yes, a man may marry after having had the pox, and the result of such a marriage, under these conditions, may be absolutely safe, medically speaking," yet, Fournier subsequently says: "We must still recognize some rare exceptions where the disease retains its contagious properties indefinitely. Such, for example, is the case of a patient whom I treated some time ago. This young man had been infected with a syphilis five years before, which one could fairly call mild, since the initial chancre was only followed by a roseola, a pulmar syphilide of slight intensity, and a sore throat. He treated it almost from the beginning sufficiently well; several times he submitted, under my advice, to a strong mercurialization (fifteen to twenty centigrammes of proto-iodide daily). Well, in spite of this treatment, and in spite of all my efforts, the patient (who, by the way, is a

smoker, a circumstance essential to note) has not ceased to be affected, during a period of five years, with lingual syphilides almost continuously. I cured him of one breaking out; one or two months later a new one attacked the tongue; then came a new treatment, followed by a new cure; then reappearance of the malady, and so on. To be brief, I always cured him, and it always began again, to use his own expression. Now that he has completely given up tobacco at my earnest solicitation, the eruptions become less frequent, but have not altogether ceased; and quite lately I have again seen him with syphilis coming on the back part of his tongue. Now, what would have happened if, relying on the mild nature of his disease, and satisfied as to the treatment followed, I had allowed the patient to marry between the two outbreaks of such symptoms? What would have happened, I need not predict theoretically, because I have had a practical demonstration. This young man took as a mistress last year—a woman who, till then, was perfectly healthy, exempt from every venereal symptom. Some weeks later he brought her to me, affected by an indurated labial chancre, manifestly received from the lingual syphilides of the patient.”

This case, and the only case cited by M. Fournier in this connection, is presented as a typical one, to illustrate the possible persistence of contagious lesions after many years, notwithstanding the disease is of mild form, and has been systematically, persistently, and efficiently treated “almost from the beginning.”

Now, is such a conclusion sufficiently warranted by this evidence on a matter of such moment? Let us look at other causes for the labial initial lesion above referred to, equally possible, equally probable. The young man did not take for a mistress a woman whose virtue was above suspicion. Such a coincidence as the contact of such a woman's lip with some other lip, with fresher syphilitic lesions, would not be so extraordinary as the acquirement of syphilis from a buccal lesion five years after infection. Such a woman would be quite in line of coming in contact with persons having active syphilis, and either directly or by mediate contagion might have acquired her labial chancre, even if she had not become this man's mistress, without exciting especial comment.

Let me place here in contrast to this, a case taken from my own experience. A young man had undoubted syphilis; from the first under my own observation: characteristic initial lesion, general gland enlargement, roseola, no pronounced papular eruption, mucous patches on tongue and inner surface of cheek. After a somewhat desultory treatment of two years, he was apparently well. Remained free from all trouble for two years; then began to have ulceration at the side of the tongue, pearl-colored at edges, characteristic appearance of the so-called chronic mu-

cons patch; was greatly addicted to tobacco, tongue resisted local treatment, unless accompanied by exclusion of tobacco; repeated recurrences for nearly five years; not markedly affected by specific treatment, which was tried from time to time, when at last he married a virtuous girl. Since that time already four years have elapsed, and the wife has not yet had a symptom of syphilis. As a result of this marriage, there is to-day a perfectly healthy child three years old, and yet within the last month the husband consulted me in regard to a recurrence of the ulceration at the border of the tongue, identical with the lesions previously referred to.

M. Fournier ignores entirely the possibility of accounting for the initial lesion of the lip, in the rare case he quotes, in any way except through the chronic lesion, which his history has shown chiefly to be dependent, for the difficulty of cure, on the use of tobacco. This one case is placed, squarely, as an offset against his eighty-seven cases (some of which were also cases of ulceration of the tongue), incontestably proved to be free from the contagious element of syphilis by the immunity from infection of the eighty-seven wives and one hundred and sixty-seven children involved. It is true he brings forward a few cases in the practice of other physicians to prove the possible inoculability of late lesions of syphilis, but those, in the face of such statistics as he has given us, are not to be accepted while they are all open to explanation in various reasonable ways, independently of the claim of a contagious element persisting for years from the date of infection.

We cannot allow even such an authority as M. Fournier to force the acceptance, without question, of a conclusion in such direct antagonism with the mass of positive and conclusive evidence that he has given us, of the non-inoculability of the late lesions of syphilis. We are, I assume, fully warranted in claiming, that the explanation of the only case which he brings up directly to prove that the late lesions of syphilis may, in exceptional cases, be contagious, undoubtedly lies in the acquirement of syphilis from a source quite independent of the five-years-old lingual lesions to which he hastily attributed it.

Eliminating this case, we have, then, a solid mass of evidence, which, on any other point, would be absolutely conclusive. In support of this, we have also the failure of all experimental inoculations with the secretions of the late lesions of syphilis, which have been failures in every instance. We have also the knowledge of some of the various occult ways in which syphilis may be acquired, defying absolute demonstration.

Repeated abortions are unquestionably often due to the syphilitic influence, but not always, and are rarely associated with syphilis after the second year from the date of infection. Putrefactive changes occur in the fœtus independently of syphilis. Pemphigoid infants are not necessarily syphilitic, even if the father can be shown to have had syphilis five, or ten, or more, years previously.

The great discussion in the Academy of Medicine in Paris, a *résumé* of which is given by Diday (page 72 of his work on "Infantile Syphilis"), shows that the conclusion was arrived at that "Pemphigus of the fœtus was not an immediate result of syphilis, but an indirect sequel of the exhaustion which this disease produces."

It is true that abortions, and the production of diseased infants in women who have had syphilis, may continue long after the active or contagious stage of syphilis has passed. It seems to me, however, that it is not too much to claim it as more than probable, that this continuance is due to changes produced in the reproductive organs of the female during the early stage of the disease, and should be classed among the sequelæ, which have been proven to be free from the contagious element of syphilis.

With this présentation of some of the facts and arguments which may be brought to bear in favor of a positive limitation of the contagious stage of syphilis to three and at farthest to four years, with or without treatment, I rest my case.

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